

**Amendments to the Claims:**

This listing of claims will replace all prior versions of the claims in this application:

**Listing of Claims:**

**Claim 1 (currently amended):** A composition for increasing the melanin content of mammalian melanocytes comprising:

a) an effective amount, which is effective to increase the melanin content of mammalian melanocytes, of one or more compounds selected from the group consisting of:

- (i) bicyclic-monoterpene diols,
- (ii) pharmaceutically acceptable salts of (i), and
- (iii) prodrugs of (i); and

b) a suitable carrier.

**Claim 2 (currently amended):** A method for increasing the melanin content of mammalian melanocytes comprising administering to said melanocytes an ~~effective~~ amount of the composition of Claim 1 which is effective to increase the melanin content of said melanocytes.

**Claim 3 (currently amended):** A composition for treating a skin proliferative disorder or a disorder of keratinization in a mammal comprising:

a) an effective amount, which is effective to treat a skin proliferative disorder or a disorder of keratinization in a mammal, of one or more compounds selected from the group consisting of:

- (i) bicyclic-monoterpene diols,
- (ii) pharmaceutically acceptable salts of (i), and

- (iii) prodrugs of (i); and
- b) a suitable carrier.

**Claim 4 (currently amended):** A method for treating a skin proliferative disorder or a disorder of keratinization in a mammal comprising administering to a mammal in need of such treatment an ~~effective~~ amount of the composition of Claim 3 which is effective to treat said skin proliferative disorder or said disorder of keratinization in said mammal.

**Claim 5 (currently amended):** A composition for preventing a skin proliferative disorder or a disorder of keratinization in a mammal comprising:

a) an ~~effective~~ amount, which is effective to prevent a skin proliferative disorder or a disorder of keratinization in a mammal, of one or more compounds selected from the group consisting of:

- (i) bicyclic-monoterpene diols,
- (ii) pharmaceutically acceptable salts of (i), and
- (iii) prodrugs of (i); and
- b) a suitable carrier.

**Claim 6 (currently amended):** A method for preventing a skin proliferative disorder or a disorder of keratinization in a mammal comprising administering to a mammal in need of such preventive treatment an ~~effective~~ amount of the composition of Claim 5 which is effective to prevent said skin proliferative disorder or said disorder of keratinization in said mammal.

**Claim 7 (currently amended):** A composition for altering or restoring pigmentation in mammalian skin, hair, wool or fur comprising:

a) an ~~effective~~ amount, which is effective to alter or restore pigmentation in mammalian skin, hair, wool or fur, of one or more compounds selected from the group consisting of:

- (i) bicyclic-monoterpene diols,
- (ii) pharmaceutically acceptable salts of (i), and
- (iii) prodrugs of (i); and

b) a suitable carrier.

**Claim 8 (currently amended):** A method for altering or restoring pigmentation in mammalian skin, hair, wool or fur comprising administering to a mammal in need of such alteration or restoration an ~~effective~~ amount of the composition of Claim 7 which is effective to alter or restore pigmentation in said mammal's skin, hair, wool or fur.

**Claim 9 (currently amended):** A composition for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising:

a) an ~~effective~~ amount, which is effective to treat a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal, of one or more compounds selected from the group consisting of:

- (i) bicyclic-monoterpene diols,
- (ii) pharmaceutically acceptable salts of (i), and
- (iii) prodrugs of (i); and

b) a suitable carrier;

~~wherein~~ said ~~effective~~ amount being is effective to directly stimulate NO synthesis within cells.

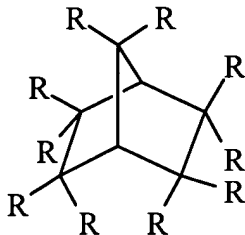
**Claim 10 (currently amended):** A method for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising administering to a mammal in need of such treatment an ~~effective~~ amount of the

composition of Claim 9 which is effective to treat said disease in said mammal and to directly stimulate NO synthesis within cells.

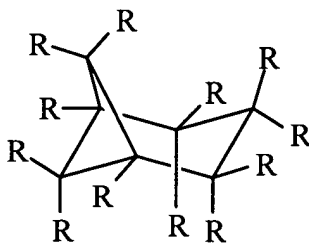
**Claim 11 (currently amended):** A composition for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising:

a) an ~~effective~~ amount, which is effective to treat a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal, of one or more compounds selected from the group consisting of:

(i) saturated C<sub>7</sub> to C<sub>50</sub> diols having the following structure:



or



wherein

each R is independently selected from R<sub>1</sub>; R<sub>2</sub>; hydroxyl, methyl, hydroxymethyl, -(CH<sub>2</sub>)<sub>n</sub>CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>n</sub>OH, -(CH<sub>2</sub>)<sub>n</sub>OR<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CHOH, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CH(OH)R<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-(CH<sub>2</sub>)<sub>n</sub>-CH<sub>2</sub>(OH), -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-(CH<sub>2</sub>)<sub>n</sub>-CH(OH)R<sub>1</sub> or -CH<sub>2</sub>OR<sub>1</sub>, wherein each n is independently an integer from 0-25;

each R<sub>1</sub> is independently selected from hydrogen; halogen; an acyl or amino acyl group containing from one atom to twenty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or a group containing from one atom to twenty atoms, one of which is carbon, nitrogen, oxygen, or sulfur, and

R<sub>2</sub> is a linear, branched or unbranched, cyclic, bicyclic or polycyclic group containing from one atom to fifty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur;

- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having the above structure;
  - (iii) pharmaceutically acceptable salts of (i);
  - (iv) prodrugs of (i);
  - (v) pharmaceutically acceptable salts of (ii); and
  - (vi) prodrugs of (ii); and
- b) a suitable carrier.

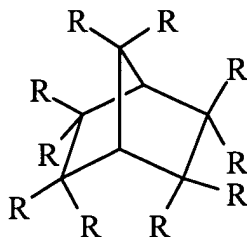
**Claim 12 (original):** The composition of claim 11, wherein the C<sub>7</sub> to C<sub>50</sub> diol is selected from the group consisting of:

- (a) 5-norbornene-2,2-dimethanol,
- (b) norbornane-2,2-dimethanol,
- (c) 2,3-norbornanediol (exo or endo or cis or trans),
- (d) 2,3-cis-exo-norbornanediol,
- (e) 2-(propyl-1,2-diol)-norbornane,
- (f) 2,7-norbornanediol,
- (g) 2-hydroxy-2-norbornanemethanol,
- (h) 1-(exo-2-norbornyl)-propan-1,2-diol,
- (i) 1-(endo-2-norbornyl)-propan-1,2-diol,
- (j) methyl-5-norbornene-2,3-dimethanol,
- (k) 2,3-cis/exo-pinenediol ([1R,2R,3S,5R]-[-]-pinenediol and [1S,2S,3R,5S]-[+]-pinenediol),
- (l) (1R)-(-)-trans-pinane-1,10-diol,

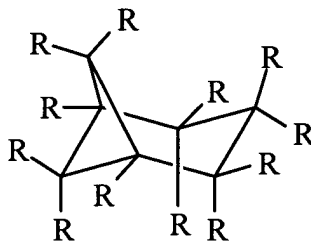
- (m) 2,3-cis/exo-bornanediol,
- (n) 2,3-trans-bornanediol,
- (o) camphanediol,
- (p) camphenediol, and
- (q) 2,3-trans-pinanediol.

**Claim 13 (currently amended):** A method for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising administering to a mammal in need of such treatment an effective amount, which is effective to treat said disease in said mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having the following structure:



or



wherein

each R is independently selected from R<sub>1</sub>; R<sub>2</sub>; hydroxyl, methyl, hydroxymethyl, -(CH<sub>2</sub>)<sub>n</sub>CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>n</sub>OH, -(CH<sub>2</sub>)<sub>n</sub>OR<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CHOH, -

$(\text{CH}_2)_n\text{-CH(OH)-CH(OH)R}_1$ ,  $-(\text{CH}_2)_n\text{-CH(OH)-}(\text{CH}_2)_n\text{-CH}_2\text{(OH)}$ ,  $-(\text{CH}_2)_n\text{-CH(OH)-}(\text{CH}_2)_n\text{-CH(OH)R}_1$  or  $-\text{CH}_2\text{OR}_1$ , wherein each  $n$  is independently an integer from 0-25;

each  $R_1$  is independently selected from hydrogen; halogen; an acyl or amino acyl group containing from one atom to twenty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or a group containing from one atom to twenty atoms, one of which is carbon, nitrogen, oxygen, or sulfur, and

$R_2$  is a linear, branched or unbranched, cyclic, bicyclic or polycyclic group containing from one atom to fifty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or

- (ii) unsaturated  $C_7$  to  $C_{50}$  diols having the above structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii).

**Claim 14 (original):** The method of Claim 13 wherein the  $C_7$  to  $C_{50}$  diol is selected from the group consisting of:

- (a) 5-norbornene-2,2-dimethanol,
- (b) norbornane-2,2-dimethanol,
- (c) 2,3-norbornanediol (exo or endo or cis or trans),
- (d) 2,3-cis-exo-norbornanediol,
- (e) 2-(propyl-1,2-diol)-norbornane,
- (f) 2,7-norbornanediol,
- (g) 2-hydroxy-2-norbornanemethanol,
- (h) 1-(exo-2-norbornyl)-propan-1,2-diol,
- (i) 1-(endo-2-norbornyl)-propan-1,2-diol,
- (j) methyl-5-norbornene-2,3-dimethanol,

- (k) 2,3-cis/exo-pinanediol ([1R,2R,3S,5R]-[-]-pinanediol and [1S,2S,3R,5S]-[+]-pinanediol)),
- (l) (1R)-(-)-trans-pinane-1,10-diol,
- (m) 2,3-cis/exo-bornanediol,
- (n) 2,3-trans-bornanediol,
- (o) camphanediol,
- (p) camphenediol, and
- (q) 2,3-trans-pinanediol.

**Claim 15 (new):** A composition for increasing the melanin content of mammalian melanocytes comprising:

a) an amount, which is effective to increase the melanin content of mammalian melanocytes, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

**Claim 16 (new):** A method for increasing the melanin content of mammalian melanocytes comprising administering to said melanocytes an amount of the composition of Claim 15 which is effective to increase the melanin content of said melanocytes.

**Claim 17 (new):** A composition for treating a skin proliferative disorder or a disorder of keratinization in a mammal comprising:



a) an amount, which is effective to treat a skin proliferative disorder or a disorder of keratinization in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

**Claim 18 (new):** A method for treating a skin proliferative disorder or a disorder of keratinization in a mammal comprising administering to a mammal in need of such treatment an amount of the composition of Claim 17 which is effective to treat said skin proliferative disorder or said disorder of keratinization in said mammal.

**Claim 19 (new):** A composition for preventing a skin proliferative disorder or a disorder of keratinization in a mammal comprising:

a) an amount, which is effective to prevent a skin proliferative disorder or a disorder of keratinization in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

**Claim 20 (new):** A method for preventing a skin proliferative disorder or a disorder of keratinization in a mammal comprising administering to a mammal in need of such preventive treatment an amount of the composition of Claim 19 which is effective to prevent said skin proliferative disorder or said disorder of keratinization in said mammal.

**Claim 21 (new):** A composition for altering or restoring pigmentation in mammalian skin, hair, wool or fur comprising:

a) an amount, which is effective to alter or restore pigmentation in mammalian skin, hair, wool or fur, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

**Claim 22 (new):** A method for altering or restoring pigmentation in mammalian skin, hair, wool or fur comprising administering to a mammal in need of such alteration or restoration an amount of the composition of Claim 21 which is effective to alter or restore pigmentation in said mammal's skin, hair, wool or fur.

**Claim 23 (new):** A composition for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising:

a) an amount, which is effective to treat a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a bornane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier;

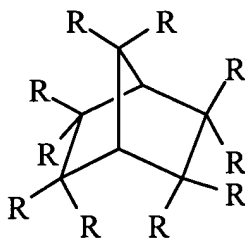
said amount being effective to directly stimulate NO synthesis within cells.

**Claim 24 (new):** A method for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising administering to a mammal in need of such treatment an amount of the composition of Claim 23 which is effective to treat said disease in said mammal and to directly stimulate NO synthesis within cells.

**Claim 25 (new):** A composition for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising:

a) an amount, which is effective to treat a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having the following structure:



wherein

each R is independently selected from  $R_1$ ;  $R_2$ ; hydroxyl, methyl, hydroxymethyl,  $-(CH_2)_nCH_3$ ,  $-(CH_2)_nOH$ ,  $-(CH_2)_nOR_1$ ,  $-(CH_2)_n-CH(OH)-CHOH$ ,  $-(CH_2)_n-CH(OH)-CH(OH)R_1$ ,  $-(CH_2)_n-CH(OH)-(CH_2)_n-CH_2(OH)$ ,  $-(CH_2)_n-CH(OH)-(CH_2)_n-CH(OH)R_1$  or  $-CH_2OR_1$ , wherein each n is independently an integer from 0-25;

each  $R_1$  is independently selected from hydrogen; halogen; an acyl or amino acyl group containing from one atom to twenty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or a group containing from one atom to twenty atoms, one of which is carbon, nitrogen, oxygen, or sulfur, and

$R_2$  is a linear, branched or unbranched, cyclic, bicyclic or polycyclic group containing from one atom to fifty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur;

- (ii) unsaturated  $C_7$  to  $C_{50}$  diols having the above structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

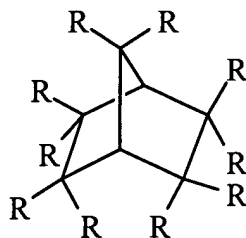
**Claim 26 (new):** The composition of claim 25, wherein the  $C_7$  to  $C_{50}$  diol is selected from the group consisting of:

- (a) 5-norbornene-2,2-dimethanol,
- (b) norbornane-2,2-dimethanol,
- (c) 2,3-norbornanediol (exo or endo or cis or trans),
- (d) 2,3-cis-exo-norbornanediol,

- (e) 2-(propyl-1,2-diol)-norbornane,
- (f) 2,7-norbornanediol,
- (g) 2-hydroxy-2-norbornanemethanol,
- (h) 1-(exo-2-norbornyl)-propan-1,2-diol,
- (i) 1-(endo-2-norbornyl)-propan-1,2-diol,
- (j) methyl-5-norbornene-2,3-dimethanol,
- (k) 2,3-cis/exo-bornanediol,
- (l) 2,3-trans-bornanediol,
- (m) camphanediol, and
- (n) camphenediol.

**Claim 27 (new):** A method for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising administering to a mammal in need of such treatment an amount, which is effective to treat said disease in said mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having the following structure:



wherein

each R is independently selected from R<sub>1</sub>; R<sub>2</sub>; hydroxyl, methyl, hydroxymethyl, -(CH<sub>2</sub>)<sub>n</sub>CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>n</sub>OH, -(CH<sub>2</sub>)<sub>n</sub>OR<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CHOH, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CH(OH)R<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-(CH<sub>2</sub>)<sub>n</sub>-CH<sub>2</sub>(OH), -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-(CH<sub>2</sub>)<sub>n</sub>-CH(OH)R<sub>1</sub> or -CH<sub>2</sub>OR<sub>1</sub>, wherein each n is independently an integer from 0-25;

each R<sub>1</sub> is independently selected from hydrogen; halogen; an acyl or amino acyl group containing from one atom to twenty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or a group containing from one atom to twenty atoms, one of which is carbon, nitrogen, oxygen, or sulfur, and

R<sub>2</sub> is a linear, branched or unbranched, cyclic, bicyclic or polycyclic group containing from one atom to fifty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or

- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having the above structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii).

**Claim 28 (new):** The method of Claim 27 wherein the C<sub>7</sub> to C<sub>50</sub> diol is selected from the group consisting of:

- (a) 5-norbornene-2,2-dimethanol,
- (b) norbornane-2,2-dimethanol,
- (c) 2,3-norbornanediol (exo or endo or cis or trans),
- (d) 2,3-cis-exo-norbornanediol,
- (e) 2-(propyl-1,2-diol)-norbornane,
- (f) 2,7-norbornanediol,
- (g) 2-hydroxy-2-norbornanemethanol,
- (h) 1-(exo-2-norbornyl)-propan-1,2-diol,
- (i) 1-(endo-2-norbornyl)-propan-1,2-diol,
- (j) methyl-5-norbornene-2,3-dimethanol,
- (k) 2,3-cis/exo-bornanediol,
- (l) 2,3-trans-bornanediol,
- (m) camphanediol, and
- (n) camphenediol.

**Claim 29 (new):** A composition for increasing the melanin content of mammalian melanocytes comprising:

a) an amount, which is effective to increase the melanin content of mammalian melanocytes, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

**Claim 30 (new):** A method for increasing the melanin content of mammalian melanocytes comprising administering to said melanocytes an amount of the composition of Claim 29 which is effective to increase the melanin content of said melanocytes.

**Claim 31 (new):** A composition for treating a skin proliferative disorder or a disorder of keratinization in a mammal comprising:

a) an amount, which is effective to treat a skin proliferative disorder or a disorder of keratinization in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and

- (vi) prodrugs of (ii); and
- b) a suitable carrier.

**Claim 32 (new):** A method for treating a skin proliferative disorder or a disorder of keratinization in a mammal comprising administering to a mammal in need of such treatment an amount of the composition of Claim 31 which is effective to treat said skin proliferative disorder or said disorder of keratinization in said mammal.

**Claim 33 (new):** A composition for preventing a skin proliferative disorder or a disorder of keratinization in a mammal comprising:

a) an amount, which is effective to prevent a skin proliferative disorder or a disorder of keratinization in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and
- b) a suitable carrier.

**Claim 34 (new):** A method for preventing a skin proliferative disorder or a disorder of keratinization in a mammal comprising administering to a mammal in need of such preventive treatment an amount of the composition of Claim 33 which is effective to prevent said skin proliferative disorder or said disorder of keratinization in said mammal.



**Claim 35 (new):** A composition for altering or restoring pigmentation in mammalian skin, hair, wool or fur comprising:

a) an amount, which is effective to alter or restore pigmentation in mammalian skin, hair, wool or fur, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier.

**Claim 36 (new):** A method for altering or restoring pigmentation in mammalian skin, hair, wool or fur comprising administering to a mammal in need of such alteration or restoration an amount of the composition of Claim 35 which is effective to alter or restore pigmentation in said mammal's skin, hair, wool or fur.

**Claim 37 (new):** A composition for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising:

a) an amount, which is effective to treat a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having a pinane structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

b) a suitable carrier;

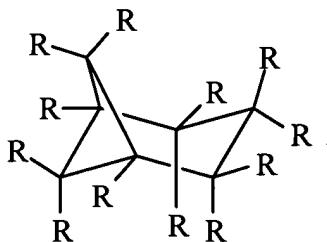
said amount being effective to directly stimulate NO synthesis within cells.

**Claim 38 (new):** A method for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising administering to a mammal in need of such treatment an amount of the composition of Claim 37 which is effective to treat said disease in said mammal and to directly stimulate NO synthesis within cells.

**Claim 39 (new)** A composition for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising:

a) an amount, which is effective to treat a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal, of one or more compounds selected from the group consisting of:

(i) saturated C<sub>7</sub> to C<sub>50</sub> diols having the following structure:



wherein

each R is independently selected from R<sub>1</sub>; R<sub>2</sub>; hydroxyl, methyl, hydroxymethyl, -(CH<sub>2</sub>)<sub>n</sub>CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>n</sub>OH, -(CH<sub>2</sub>)<sub>n</sub>OR<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CHOH, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-CH(OH)R<sub>1</sub>, -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-(CH<sub>2</sub>)<sub>n</sub>-CH<sub>2</sub>(OH), -(CH<sub>2</sub>)<sub>n</sub>-CH(OH)-(CH<sub>2</sub>)<sub>n</sub>-CH(OH)R<sub>1</sub> or -CH<sub>2</sub>OR<sub>1</sub>, wherein each n is independently an integer from 0-25;

each R<sub>1</sub> is independently selected from hydrogen; halogen; an acyl or amino acyl group containing from one atom to twenty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or a group containing from one atom to twenty atoms, one of which is carbon, nitrogen, oxygen, or sulfur, and

R<sub>2</sub> is a linear, branched or unbranched, cyclic, bicyclic or polycyclic group containing from one atom to fifty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur;

- (ii) unsaturated C<sub>7</sub> to C<sub>50</sub> diols having the above structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii); and

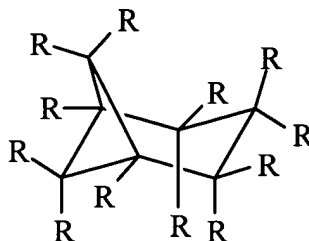
b) a suitable carrier.

**Claim 40 (new):** The composition of claim 39, wherein the C<sub>7</sub> to C<sub>50</sub> diol is selected from the group consisting of:

- (a) 2,3-cis/exo-pinenediol ([1R,2R,3S,5R]-[-]-pinenediol and [1S,2S,3R,5S]-[+]-pinenediol),
- (b) (1R)-(-)-trans-pinane-1,10-diol, and
- (c) 2,3-trans-pinenediol.

**Claim 41 (new):** A method for treating a disease mediated by perturbations of the NO/cGMP/PKG pathway in a mammal comprising administering to a mammal in need of such treatment an amount, which is effective to treat said disease in said mammal, of one or more compounds selected from the group consisting of:

- (i) saturated C<sub>7</sub> to C<sub>50</sub> diols having the following structure:



wherein

each R is independently selected from  $R_1$ ;  $R_2$ ; hydroxyl, methyl, hydroxymethyl,  $-(CH_2)_nCH_3$ ,  $-(CH_2)_nOH$ ,  $-(CH_2)_nOR_1$ ,  $-(CH_2)_n-CH(OH)-CHOH$ ,  $-(CH_2)_n-CH(OH)-CH(OH)R_1$ ,  $-(CH_2)_n-CH(OH)-(CH_2)_n-CH_2(OH)$ ,  $-(CH_2)_n-CH(OH)-(CH_2)_n-CH(OH)R_1$  or  $-CH_2OR_1$ , wherein each n is independently an integer from 0-25;

each  $R_1$  is independently selected from hydrogen; halogen; an acyl or amino acyl group containing from one atom to twenty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or a group containing from one atom to twenty atoms, one of which is carbon, nitrogen, oxygen, or sulfur, and

$R_2$  is a linear, branched or unbranched, cyclic, bicyclic or polycyclic group containing from one atom to fifty atoms, at least one of which is carbon, nitrogen, oxygen, or sulfur; or

- (ii) unsaturated  $C_7$  to  $C_{50}$  diols having the above structure;
- (iii) pharmaceutically acceptable salts of (i);
- (iv) prodrugs of (i);
- (v) pharmaceutically acceptable salts of (ii); and
- (vi) prodrugs of (ii).

**Claim 42 (new):** The method of Claim 41 wherein the  $C_7$  to  $C_{50}$  diol is selected from the group consisting of:

- (a) 2,3-cis/exo-pinanediol ([1R,2R,3S,5R]-[-]-pinanediol and [1S,2S,3R,5S]-[+]-pinanediol)),
- (b) (1R)-(-)-trans-pinane-1,10-diol, and
- (c) 2,3-trans-pinanediol.